

APPLICATIONS OF HOLOGRAPHY AND OPTICAL DATA PROCESSING

Editors

MAROM

FRIESEM AND WIENER-AVNEAR

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APPLICATIONS OF HOLOGRAPHY AND OPTICAL DATA PROCESSING

Proceedings of the International Conference

Jerusalem, August 23 - 26, 1976

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EDITOR'S PREFACE

To the scores of travellers from every corner of the earth whom the ancient city of Jerusalem has welcomed and inspired over the centuries, can now be added another group - the participants in the August 1976 International Conference on Applications of Holography and Optical Data Processing.

As evidenced by the conference proceedings, collected in this volume, a wide range of topics, representing research on the forefront of applied and theoretical optics, was covered in the four day meeting. Included were holographic applications in medicine, interferometry, display, storage and retrieval, as well as image processing, measuring techniques, spectroscopy, and, of course, recording materials and devices.

Agreement on the high points of this conference would be hard to find for the meeting was characterized by a high level of scientific presentations and the active participation of many eminent scientists in the field of optics. However, as one participant wryly remarked while the conference excursion bus, headed down from Jerusalem to the Dead Sea (395 meter below sea level) -- "Well, there is no question as to what is going to be the low point of this conference".

It is also probably safe to say that the general concensus among the participants was that this August meeting served to reaffirm the vitality and viability of the research area to which we are all committed. If some people were questioning themselves about the future of Optical Data Processing, the participants at this conference reaffirmed their belief in its promising prospects, when coherent and incoherent techniques, complemented by electronic support will find practical applications. Indeed it has left us with renewed anticipation of upcoming gatherings and significant advances in this field.

To keep up the momentum generated by the conference, the editors decided to publish the proceedings at the earliest possible date. This goal has been achieved at the occasional expense of editing and polishing of language and style, since, with the exception of minor modifications, the material in this publication has been reproduced directly from copies supplied by the authors. However, the high scientific standards that governed the selection of papers for the conference were maintained and for this we owe our gratitude to the referees who screened the material for publication.

We would also like to extend our thanks to all those organizations who lent their support to the conference, and in particular, to the International Commission of Optics, which was the prime sponsor.

In the convivial conference atmosphere where old acquaintances were renewed and new ones made, we were constantly reminded of the absence of the mentor of our field, Professor Dennis Gabor, prevented by illness from joining us in Jerusalem. It is to him that the editors would like to dedicate this volume.

E. Marom
A.A. Friesem
E. Wiener-Avnear

Jerusalem, August 1976

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Chairman: A. A. FRIESEM



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